# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/485,525 | 02/09/2000 | DOROTHEA LAMPE | P99,2604 | 2026 |

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| EXAMINER |
|---|
| RYMAN, DANIEL J |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2665 | |

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

| **Office Action Summary** | Application No. | Applicant(s) |
|---|---|---|
| | 09/485,525 | LAMPE ET AL. |
| | Examiner | Art Unit | |
| | Daniel J. Ryman | 2665 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☒ Responsive to communication(s) filed on *13 June 2005*.

2a)☐ This action is **FINAL**.      2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) *10-19* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *  c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1.      Applicant's arguments filed 6/13/2005 have been fully considered but they are not persuasive. On page 2 of the Response, Applicant asserts that Soumiya's "type of acceptance algorithm can only supply yes/no statements, that is, whether or not a new connection can be accepted or not." Examiner, respectfully, disagrees. In addition to accepting or rejecting a connection, Soumiya also supplies a calculation of the estimated total bandwidth (W) (Figs. 19 and 23 and col. 21, lines 22-27).

2.      On page 3 of the Response, Applicant further asserts that "the multiple starting of an acceptance algorithm is not disclosed by Soumiya." Again, Examiner, respectfully, disagrees. As is evinced in Figs. 19 and 23, Soumiya's acceptance algorithm is started each time a connection is set-up or released. Therefore, Soumiya does disclose "multiple starting of an acceptance algorithm."

3.      Given the above arguments, Examiner maintains that claims 10-19 are obvious given the cited prior art.

### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.      Claims 10 and 12-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Soumiya et al (USPN 5,583,857).

6.      Regarding claim 10, Soumiya discloses a method for statistical multiplexing of ATM

connections comprising: conducting a plurality of ATM connections over a common connecting

line (col. 5, lines 48-56 and col. 7, lines 12-28), the plurality of ATM connections having an

effective bandwidth (estimated bandwidth) reserved for conduction of the aggregate of the

plurality of ATM connections on the connecting line (col. 17, lines 24-54; col. 18, lines 62-65;

col. 19, lines 40-43; and col. 20, lines 48-col. 21, line 29, esp. col. 20, line 67-col. 21, line 3), and

utilizing an acceptance algorithm that allocates potential added connections to one of a first class

(Fig. 19: step 202 VBR) and a second class (Fig. 19: step 202 CBR) (Fig. 19 and col. 17, lines

15-23), and deciding whether an additional potential added connection can be accepted by the

common connecting line based on acceptance criteria (total estimated bandwidth including the

potential added connection is less than the physical bandwidth) and a prescribed effective

bandwidth (estimated bandwidth) (Fig. 19; col. 7, lines 19-64; and col. 17, lines 15-67), the

deciding step comprising: identifying the prescribed effective bandwidth (estimated bandwidth)

on a step-by-step basis with at least one of a setup and a release of connection (Figs. 19-21, 23,

and 24; col. 17, line 15-col. 21, line 29; and col. 21, lines 31-48), wherein the identification starts

from an initial value and the acceptance algorithm is performed at every step (Figs. 19-21, 23,

and 24; col. 17, line 15-col. 21, line 21; and col. 21, lines 31-48) where it is inherent that there is

an initial value such that the process either begins with a zero effective bandwidth upon

initialization if no calls are yet allocated bandwidth or the process is initialized with the

bandwidth of any connections the line will carry at initialization; determining whether at least

one of the additional potential added connection or a released connection may be accepted by at

least one of the first class and the second class (Fig. 19 and 23; col. 7, lines 19-64; col. 17, lines

15-23; and col. 21, lines 31-48); defining a first bandwidth representative of the first class (V)

and a second bandwidth representative of the second class (VX) (Fig. 19 and 23; col. 17, lines

28-67; col. 20, line 48-col. 21, line 29; and col. 21, lines 31-48), modifying at least one of the

first and second bandwidths by at least one of a sustainable cell rate and a peak cell rate based on

the acceptance of the additional potential added connection to at least one of the first class and

the second class (Figs. 19-21, 23, and 24; col. 17, line 15-col. 21, line 29, esp. col. 17, lines 15-

67; and col. 18, line 17-col. 19, line 43; and col. 21, lines 31-48) where the first and second

bandwidths are modified by a peak cell rate; and at least one of accepting and rejecting the

additional potential added connection based on at least the identified prescribed effective

bandwidth and the acceptance criteria (total estimated bandwidth including the potential added

connection is less than the physical bandwidth) (Figs. 19-21; col. 17, lines 54-62; col. 21, lines 4-

29; and col. 21, lines 31-48).

7.      Regarding claim 12, Soumiya discloses that at least one of the acceptance criteria is

established such that, in the case of the connection setup, when the additional potential added

connection can be accepted to the first class (VBR), a calculation is performed to determine

whether the first bandwidth identified is adequate including this connection, wherein the first

bandwidth is not allowed to exceed the sum of the peak cell rates of all connections (Figs. 19-21;

col. 18, lines 51-55; and col. 21, lines 4-29) where VH1 is always less than or equal to PH1

(peak cell rates) since VH1 is not equal to PH1 only when VH1 is equal to AH1 when AH1 is

less than PH1; and the first bandwidth is incremented by the first traffic parameter value

(average cell rate, Ra) (Figs. 19-21, ref. 302-304; col. 18, lines 17-24; and col. 18, lines 51-55)

when the at least one of the acceptance criteria (estimated peak cell rate is greater than average

cell rate) is met (Figs. 19-21, ref. 303, and col. 18, lines 51-55) and the first bandwidth is

incremented by the second traffic parameter value (peak cell rate, Rp) (Figs. 19-21, ref. 302, 303,

and 305; col. 18, lines 35-43; and col. 18, lines 51-55) when the at least one of the acceptance

criteria is not met (Figs. 19-21, ref. 303, and col. 18, lines 51-55).

8.      Regarding claim 13, Soumiya discloses that when the additional potential added

connection cannot be allocated to the first class (VBR), it is automatically allocated to the second

class (CBR) and the second bandwidth is incremented by the second traffic parameter value

(peak cell rate) (Fig. 19, ref. 203, and col. 17, lines 15-67).

9.      Regarding claim 14, Soumiya discloses at least one of the acceptance criteria (Fig. 24) is

established such that, in the case of the connection release when the released connection can be

accepted by the first class (Fig. 23: VBR), a calculation is performed to determine whether the

first bandwidth (V), exclusive of this connection, is adequate for the remaining connections (Fig.

23 and 24 and col. 21, lines 31-48), wherein the first bandwidth is not allowed to exceed the sum

of the peak cell rates of all connections (Figs. 19-21, 23, and 24; col. 18, lines 51-55; col. 21,

lines 4-29; and col. 21, lines 31-48) where VH1 is always less than or equal to PH1 (peak cell

rates) since VH1 is not equal to PH1 only when VH1 is equal to AH1 when AH1 is less than

PH1; and the first bandwidth is diminished by the second traffic parameter value (peak cell rate,

Rp) when the at least one of the acceptance criteria is met (estimated peak cell rate is less than

average cell rate) (Fig. 24; col. 18, lines 51-55; and col. 21, lines 31-48) and the first bandwidth

is diminished by the first traffic parameter value (average cell rate, Ra) when the at least one of

the acceptance criteria is not met (estimated peak cell rate is less than average cell rate) (Fig. 24;

col. 18, lines 51-55; and col. 21, lines 31-48).

10.    Regarding claim 15, Soumiya discloses that when the connection to be released cannot be

allocated to the first class (VBR), it is automatically allocated to the second class (CBR) and the

second bandwidth is diminished by the second traffic parameter value (peak cell rate) (Fig. 23;

col. 17, lines 15-67; and col. 21, lines 31-48).

*Claim Rejections - 35 USC § 103*

11.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

12.    Claims 11 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Soumiya et al (USPN 5,583,857) as applied to claim 10 above, and further in view of Ben-Nun et

al (USPN 5,515,363).

13.    Regarding claim 11, Soumiya discloses that the peak cell rate is of the corresponding

connection (Figs. 19-21, 23, and 24; col. 17, line 15-col. 21, line 29, esp. col. 17, lines 15-67;

and col. 18, line 17-col. 19, line 43; and col. 21, lines 31-48). Soumiya does not expressly

discloses that the sustainable cell rate (SCR) is an upper limit for an average cell rate with which

the cells are transmitted during existence of the connection since Soumiya discloses using an

average cell rate rather than a sustainable cell rate. However, Soumiya also discloses that the

average cell rate is defined at the start of the connection for variable speed connections (col. 9,

lines 7-44). Ben-Nun discloses, in an ATM system, that the sustainable cell rate is an upper limit

for an average cell rate with which the cells are transmitted during existence of the connection

(col. 4, lines 24-34). Ben-Nun also discloses that the SCR is a negotiated parameter for variable

rate connections (col. 4, line 66-col. 5, line 8). It would have been obvious to one of ordinary

skill in the art at the time of the invention to use SCR in place of the average cell rate, where

SCR is an upper limit for an average cell rate with which the cells are transmitted during

existence of the connection, since SCR is a parameter negotiated for variable rate connections at

the start of the connection.

14.      Regarding claim 16, Soumiya in view of Ben-Nun discloses at least one of the acceptance

criteria (Fig. 24) is established such that when the connection to be released is allocated to the

first class (Fig. 23: VBR), a calculation is performed to determine whether the first bandwidth

(V) without this released connection is adequate for the remaining connections (Fig. 23 and 24

and col. 21, lines 31-48); and wherein the first bandwidth is diminished by the second traffic

parameter value (peak cell rate, Rp) when the at least one acceptance criterion is met (estimated

peak cell rate is less than average cell rate) (Fig. 24; col. 18, lines 51-55; and col. 21, lines 31-48)

and the value of the identified first bandwidth is upwardly limited by the sum of the peak cell

rates of the first class (Fig. 24; col. 18, lines 51-55; and col. 21, lines 31-48).

15.      Regarding claim 17, Soumiya in view of Ben-Nun discloses that the effective bandwidth

is derived from the sum of the first and second bandwidth (Soumiya: Figs. 19-21, 23, and 24,

step 206'; col. 17, lines 24-62; col. 21, lines 4-29; and col. 21, lines 31-48).

16.      Regarding claim 18, Soumiya in view of Ben-Nun discloses that the acceptance

algorithm is started only once per connection to be one of potentially added and released

(Soumiya: Figs. 19 and 23: call request admission and call request release; col. 17, lines 15-67;

col. 21, lines 4-29; and col. 21, lines 31-48).

17.    Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soumiya et al

(USPN 5,583,857) in view of Applicant's Admitted Prior Art.

18.    Regarding claim 19, referring to the rejection of claim 10, Soumiya discloses all of the

limitations of claim 19, as outlined in the rejection of claim 10, except that the acceptance

algorithm is a sigma rule algorithm. Applicant admits that the sigma rule algorithm is known in

the prior art as a simple method for handling acceptance procedures (page 3, lines 3-6) where the

sigma rule allocates a potential connection to one of two classes (page 3, line 3-18). Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention to use a

sigma rule algorithm, which allocates a potential connection to one of two classes, as an

acceptance algorithm, which allocates a potential connection to one of two classes, since the

sigma rule algorithm is a simple method.
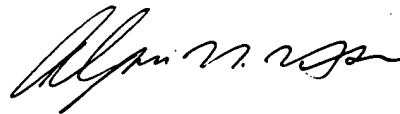
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The

examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel J. Ryman
Examiner
Art Unit 2665


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PRIMARY EXAMINER